

Notice of Allowability

Application No.

10/721,988

Applicant(s)

LINZMEIER ET AL.

Examiner

Nitin Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/29/2006.
2. ☒ The allowed claim(s) is/are 2-13, 15-16, 18-22, 24-28, 30-38 Now renumbered 1-33 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 11/25/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Nitin Patel

REASON FOR ALLOWANCE

1. Claims 2-13,15-16,18-22,24-28,30-38 is allowed. Claims 1,14,17,23,29 have been cancelled.

2. The following is an examiner's statement of reason for allowance:

The prior art fails to teach or suggest a display apparatus for optimizing a displayed image for use in an electronic device having a display for presenting a visual image, the display comprising a pixel array; **a processor for determining an intensity of a backlight for illuminating the display and a controller coupled to the display and the processor, wherein the controller optimizes the visual image corresponding to an intensity of the backlight by adjusting only a brightness of pixels in a pixel array responsive to changes in the intensity of a backlight, the brightness of a pixel adjusted by adjusting a level of a red, a green or a blue setting** as claimed in claim 2.

The prior art fails to teach or suggest a display apparatus for optimizing a displayed image for use in an electronic device having a display for presenting a visual image, the display comprising a pixel array; **a processor for determining an intensity of a backlight for illuminating the display and a controller coupled to the display and the processor wherein the controller optimize the visual image corresponding to an intensity of the backlight by adjusting a level of a red, a green or a blue setting of a pixel of the pixel array, wherein the level of the red, the green or the blue setting is adjusted inversely proportionally to the intensity of the backlight** as claimed in claim 5.

The prior art fails to teach or suggest **a method for optimizing an image in a display of an electronic device responsive to a change in intensity of a backlight comprising:**

determining a factor for adjusting the image according to the intensity of the backlight including determining a constant value for scaling a brightness of a pixel in the display and adjusting only the brightness of pixels in a pixel array, using the factor responsive to changes in the backlight intensity as claimed in claim 13.

The prior art fails to teach or suggest a method for optimizing an image in a display of an electronic device responsive to a change in an intensity of a backlight comprising:

determining a factor for adjusting the image according to the intensity of the backlight including determining a constant value for scaling a brightness of a pixel in the display; adjusting the image using the factor; and determining the magnitude of a one of red, a green and a blue setting for a pixel in the display inversely proportionally to the change in the intensity of the backlight unless the magnitude of the one exceeds a limit wherein the magnitude of the one is set to a maximum and a factor proportional to the one is determined for a remaining setting as claimed in claim 18.

The prior art fails to teach or suggest a display controller for providing an image optimized to a backlight intensity comprising: **a first input for receiving a first data to display as the image; a second input corresponding to a backlight intensity of a**

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display having a pixel; an output for driving the pixel of the display; and a processor for adjusting a brightness of the pixel responsive to one of the first and second input, the processor adjusting a value for the red, the green or the blue setting for the pixel to adjust the brightness of the pixel in inverse proportion to the backlight intensity as claimed in claim 21.

The prior art fails to teach or suggest a display controller for providing an image optimized to a backlight intensity comprising: **a first input for receiving a first data to display as the image; a second input corresponding to a backlight intensity of a display having a pixel; an output for driving the pixel of the display; and a processor for adjusting a brightness of the pixel responsive to one of the first and second input, the processor adjusting a value for the red, the green or the blue setting for the pixel to adjust the brightness of the pixel in inverse proportion to the backlight intensity wherein the processor adjusts the value for the red, the green or the blue setting for the pixel inversely proportionally to the backlight intensity until a one of the setting would exceed a limit value wherein the one of the setting is set to a maximum value and an other setting is increased by the percentage increase of the one as claimed in claim 26.**

The prior art fails to teach or suggest a display apparatus for optimizing a displayed image for use in an electronic device comprising:

A display for presenting a visual image, the display comprising a pixel array; a controller coupled to the display for rendering and storing visual images; a processor coupled to the controller wherein the processor controls an intensity

of a backlight, the backlight for illuminating the display, the processor further retrieves images from the controller, creates an optimized rendered visual image corresponding to the intensity of the backlight and returns the optimized rendered visual image to the controller for display, wherein the visual image is optimized by adjusting only the brightness of pixels of the pixels array, the brightness of a pixel adjusted by adjusting a level of a red, a green or a blue setting as claimed in claim 30.

The prior art fails to teach or suggest a display apparatus for optimizing a displayed image for use in an electronic device comprising:

A display for presenting a visual image, the display comprising a pixel array; a controller coupled to the display for rendering and storing visual images; a processor coupled to the controller wherein the processor controls an intensity of a backlight, the backlight for illuminating the display, the processor further retrieves images from the controller, creates an optimized rendered visual image corresponding to the intensity of the backlight and returns the optimized rendered visual image to the controller for display, wherein the visual image is optimized by adjusting only the brightness of pixels of the pixels array, the brightness of a pixel adjusted by adjusting a level of a red, a green or a blue setting for a pixel of the pixel array wherein the level of the red, the green or the blue setting is adjusted inversely proportionally to the intensity of the backlight as claimed in claim 32.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 571-272-7677. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H. Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nitin Patel
Examiner
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